

# ABSTRACT

A microchannel apparatus and method for processing a sample are disclosed. The apparatus include a multisite reaction channel, one or more sample-preparation stations upstream of the reaction channel, for carrying out one or more selected sample-preparation steps effective to convert a sample to the bulk-phase medium, and one or more product-processing stations downstream of the reaction channel, for processing products generated in one or more of the reaction regions. Also included is structure for transferring solvent or solvent components between one of the sample-preparation stations and one or more selected reaction regions in the reaction channel, and between one or more selected reaction regions in the reaction channel and one of said product-processing stations, under the control of a control unit.